ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/782-6762

April 10, 2001

Mr. Michael McAteer
U.S. EPA Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, IL 60604-3590

Reference: 1630200005 St. Clair County
Sauget Area 1 Site
Superfund/Technical
Administrative Order by Consent dated January 21, 1999
Draft Engineering Evaluation/Cost Analysis (EE/CA)
Remedial Investigation/Feasibility Study (RI/FS) Report

Dear Mr. McAteer:

The referenced document for the Sauget Area 1 Site was received on March 12, 2001. These review comments are due to you by April 13, 2001. Rob Watson and Terri Blake Myers provided the ARARs review; Thomas Williams reviewed the groundwater modeling study.

General Comments

1. Page 2-22. Several paragraphs of text describe historical activities at the William G. Krummrich Plant (WGK). Rather than state that PCBs and PCB-containing products were produced at the WGK, only the term "aroclor" is used. This seems misleading in consideration of the nearly 50 years of PCB production at the WGK, because that acronym is used on pages 2-14, 2-21, and 2-27 regarding transformers and waste oil at three other industrial facilities. The term "PCBs" is used throughout the document to describe contaminants. Suggest revising text for consistent use of the terms.

2. Page 2-32. It may be appropriate to add "PCBs" to the last sentence of the second paragraph when describing wastewater.

3. Page 2-35. If it is important to state the source of funding in Section 2.3.2 regarding Creek Segment B and Site G, include that information in Section 2.3.3 regarding Site G.

4. Page 5-5. It should be noted that leachate is also defined at 35 Ill. Adm. Code 720.110 and it may be relevant to include that definition in addition to the Federal citation in the first paragraph.

5. Page 5-5. The last paragraph describes TCLP results and implies that some results are RCRA hazardous; however, that statement is not made here or elsewhere in the document. It is important to characterize the waste in the fill areas and clearly state those findings in the document.

6. Page 5-8. The last paragraph should state that 50 drums and remnants of drums were identified during trenching activities; this number of drums is identified on pages 4-5 and 5-4 and could be added to the second sentence in this paragraph.

7. Page 5-9. Comments on the BIOCHLOR model appear at the end of this list of comments.

8. Page 5-11. There appears to be missing text at the beginning of the first paragraph.

9. Pages 5-17 and 5-18. There appears to be a serious misunderstanding here and throughout this document regarding the classification of groundwater at the Sauget Area 1 Site. Groundwater in the American Bottoms meets the definition of a Class I Potable Resource Groundwater according to 35 Ill. Adm. Code 620. It is understood that groundwater use prohibition ordinances are in place in the Villages of Sauget and Cahokia to prevent human consumption of groundwater; however, that is not the basis for classification of the groundwater resource. All references to Class II groundwater should be revised to Class I groundwater and will result in significant changes in the site characterization, discussion of ARARs, conclusions, and recommendations sections of this document.

10. Page 5-31. It should be stated clearly in the last paragraph that materials removed from Creek Segment A were disposed off site. Could it be reasonably concluded that the source of the hot spot identified in Site I is industrial waste that was placed there for disposal? If so, that statement should be made.

11. Page 5-40. If the primary VOC found in Dead Creek surface water samples is acetone and it is a laboratory artifact, it would be helpful to the reader for the author to identify the next order VOC found in the samples.

12. Page 6-3. What is the relevance of the use of the Texas Natural Resource Conservation Commission protocol in the evaluation of effects screening levels?

13. Page 8-1. The first statement following the second bullet regarding buried drums should be clarified to include a statement regarding the drums found during fill area trenching activities.

14. Page 8-2. The first statement at the top of the page should acknowledge that the areas included in the Sauget Area 1 Site contributed to regional groundwater contamination. The authors seem to point the reader to other unknown and unidentified regional sources. Also, review of groundwater total VOCs on Figure 4-18 indicates that two of the background wells near Site H and Site I had non detects indicating that not all of the groundwater in the area is contaminated.

15. Page 8-2. The third statement following the first bullet should be revised to evaluate contaminant levels compared to Class I groundwater standards, not Class II.

16. Page 8-3. The first statement at the top of the page should include the WGK as a significant source of impact to groundwater.

17. Page 9-4. The use of the "Presumptive Remedy for CERCLA Municipal Landfill Sites" guidance may be helpful to this effort, but it should be clearly stated for any reader's understanding that the fill areas are not municipal landfills.

18. Pages 9-18, 9-19, 9-31, 9-32, 9-34, and 9-39. The references to the Class II groundwater standards and a groundwater management zone should be reevaluated in consideration of Class I groundwater standards.

19. Page 9-27. Regarding the drinking water scenario and all the previous comments regarding Class I and Class II groundwater standards, generally the authors have eliminated the pathway before evaluating the risk.

20. Page 9-47. Without regard to whether it is germane to discuss groundwater quality standards 400 to 500 years into the future, restoration of groundwater quality to pre-release conditions through natural attenuation will take hundreds of years.

ARARs Review Comments – R. Watson

1. General: The information provided does not identify the regulatory classification(s) of the wastes and contaminated media that will be managed at the site. The regulatory classification of these materials must be known in order to accurately identify the ARARs for any proposed remedial action. Considering the existing data and history of the sites in Area 1, it is recommended that the wastes and contaminated media at these sites be managed in accordance with both TSCA and RCRA.

2. Section 9.1.1.3, ARARs: If TACO is a "to be considered" requirement (ARAR) in the remedial action, then the requirements of TACO at 742.305 should also be included as an

action specific ARAR. Specifically, source materials that exceed certain criteria, such as the soil saturation limits, must be removed if the facility is proposing to exclude a pathway.

3. Section 9.1.1.3, ARARs: Both federal and state requirements for nonhazardous landfills are cited as being relevant and appropriate requirements (ARARs) in the tables of location and action specific ARARs. This is not acceptable. No justification for this determination is provided. As stated on page ii of the Executive Summary, Sites G, H, I, L, and N were all used for the disposal of industrial, commercial, liquid waste materials. Given the types of chemical wastes involved at these sites, the RCRA requirements for hazardous waste landfills should be considered ARARs for the remedial actions at these sites. These requirements include, but are not limited to, the cover, closure and post-closure, and groundwater monitoring requirements for hazardous waste landfills at 35 IAC 724.

4. Executive Summary: Source, Nature and Extent of COPCs: This section of the document makes several statements regarding the findings of the investigations. Considering what is already known about the sites in Area 1, I find it very difficult to agree with their conclusions that no significant sources requiring removal were identified at the sites, that the waste materials present do not serve as a significant ongoing source of impact to the groundwater, that the DNAPL is immobile, or that the COPCs in the groundwater should attenuate to below action levels before reaching the Mississippi River.

   The geology of these sites consists of silt and sandy silt near the surface, with sand and gravel extending over 120 feet down to bedrock. The water table is generally less than 10 feet bgs. Large quantities of raw chemical wastes were disposed of at these sites. Some of it spontaneously ignited and burned underground for several weeks. This could happen again. It is likely that some drums at these sites are still intact today (as they were at Site Q when drums were removed in 1999 and 2000). The chemical wastes in these drums will not be released to the soil and groundwater for an unknown length of time. The ways that wastes in these drums will impact the conditions at a site can only be guessed at this time. Clearly, any remedy for the Sites in Area 1 needs to include removal of the chemical wastes from these sites.

ARARs Review Comments – T. Myers

1. The table found on Page 9-30 of the document references 35 Ill. Adm. Code Part 740 as an Chemical-Specific ARAR for groundwater. The facility is not enrolled in the Illinois EPA's Site Remediation Program (SRP) implemented in accordance with the regulations found in 35 Ill. Adm. Code Part 740. Therefore, 35 Ill. Adm. Code Part 740 is not an ARAR for this site and must be removed from list of Chemical-Specific ARARs for groundwater.

2. The American Bottoms meet the definition of a Class I: Potable Resource Groundwater in accordance with 35 Ill. Adm. Code 620.210 and must therefore meet the

groundwater quality standards found in 35 Ill. Adm. Code 620.410. It is not appropriate for the facility to reclassify the groundwater based on what the facility believes is the impracticability of achieving the 35 Ill. Adm. Code 620.410 groundwater quality standards and the current groundwater usage in the vicinity of the site. However, in accordance with 35 Ill. Adm. Code 620.260 the facility has the option to petition the Illinois Pollution Control Board to reclassify the groundwater in accordance with the procedures for adjusted standards specified in Section 28.1 of the Act and 35 Ill. Adm. Code 106, Subpart G.

3. There appears to be a typographical error in the table, found on Page 9-32 of the subject document, addressing Action-Specific ARARs. The last reference, addressing the establishment of groundwater monitoring and analytical procedures to demonstrate compliance with standards, should be 35 Ill. Adm. Code 724, Subpart F.

Groundwater Modeling Study Comments – T. Williams

1. Executive Summary. This modeling study is based upon BIOCHLOR natural attenuation modeling using data from monitoring well transects at Site 1. The submittal states, "The modeling approach was based upon calibrating the model to observed site data, and then determining the maximum distance to plume boundary using a plume boundary equal to applicable Illinois TACO Class II Groundwater Remediation Objective (Class II groundwater standard)." In addition it is stated that benzene in the deep interval, was predicted to extend 3500 feet away from the source.

In order to properly evaluate the data provided it is necessary for the Illinois EPA to have all information, equations, and calculations to analyze the results.

2. The submittal indicates that 20 plumes are now stable and only four plumes are estimated to grow approximately 40 feet from their source.

3. The submittal indicates that Class II Remediation Objectives are currently being used for evaluation of the model.

The model is currently using Class II groundwater standards as Remediation Objectives for evaluation of the model. In accordance with the provisions found in 35 Ill. Adm. Code Part 620,to use Class II groundwater standards as Remediation objectives on and off the facility, the Illinois EPA requires data that demonstrates the geologic and hydrologic conditions do not meet the criteria in 35 Ill. Adm. Code 620.210 (a) through (e).

Page seven of the groundwater section reveals hydraulic conductivity data greater than 1 x 10-4 cm/sec for all three horizons of sand and gravel deposits. In accordance with 35 Ill. Adm. Code 620.210(4)(b), these units meet the hydraulic conductivity requirement for Class I groundwater.

4. A default value for the foc was used in the model. The facility should run actual foc values for the calculations.

5. In order to fully determine the nature and extent of contamination, it will be necessary to analyze all contaminants of concern to Class I groundwater standards and or SW-846 which ever is more stringent.

6. A list of procedures to be used for the assurance that the Biochlor model is performing as predicted should be submitted to the Illinois EPA for review.

You should note that these comments do not address issues of natural resource injury, natural resource damage assessment, and natural resource restoration. If you have any questions, please call me at 217/785-9397.

Sincerely,

Candy Morin, Remedial Project Manager
National Priorities List Unit
Federal Site Remediation Section
Bureau of Land

cc: Mike Henry, IDNR
Kevin de la Bruere, USFWS

sgtarea1/rifseeca4.01